

## **Appendix B**

### **Alternatives Development Technical Support Document**



### Task 3: Alternatives Development and Analysis

#### *Subtasks 3.1-3.5, Deliverable 6*

#### Technical Support Document

## 1.0 INTRODUCTION AND APPROACH

The Over the River Project (OTR) is an artist-generated concept for a proposed work of art that would be removed after a two-week exhibition period. The artists Christo and Jeanne-Claude propose to install a series of fabric panels suspended over approximately 5.9 miles of a 42.4-mile stretch of the Arkansas River between Cañon City and Salida, Colorado. The fabric panels would be supported above the river by a system of cables and anchors.

As an artist-generated proposal, the universe of alternatives is considerably narrowed. Neither the BLM nor the third-party contractor is in a position to generate different designs of the art itself, though variations in project components provide a basis for a range of alternatives. The remainder of this document describes the process that was used to develop project alternatives. Key steps in that process included the following:

- Define **Alternatives Development Framework**. This included a review of NEPA, CEQ Regulations, and BLM Handbook guidance.
- **Review Scoping Comments**.
- Develop preliminary list of **Project Components**. Key project components include panel locations, transportation, visitor management, and temporal considerations.
- Conduct **Stakeholder and Cooperating Agency Interviews and Meetings**. A series of meetings were held with cooperating agencies and other stakeholders to identify potential concerns and considerations for alternative formulation.
- Develop **“Long List” of Project Elements**. These are the specific elements that make up each project component, e.g., panel display, transportation, etc. The “long list” for panel display, for example, included all the proposals previously made by the artists as well as reduced options that respond to specific site issues.
- Define **Screen One Criteria**. These include a series of “fatal flaw” considerations.
- **Apply Screen One**. The criteria were applied and the results documented, resulting in some components being carried forward for further analysis and others dropping out.
- Define **Screen Two Criteria**, i.e., “Relative Rating/Evaluation.” This consisted of a set of ranking criteria, e.g., high to low, that were used to screen out less desirable options and focus the analysis on more promising possibilities.
- **Apply Screen Two**. The results of applying the screening criteria were documented and less promising options were dropped.
- **Package Alternatives**. A range of alternatives was defined by assembling one element of each project component, i.e., a panel display component, a transportation component, etc.
- **Document and Summarize Overall Results**.

Each of these steps is described in further detail in the remainder of this document.

### 1.1 Alternatives Development Framework

NEPA directs agencies to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources . . . ” (NEPA Section 102 (2)(E)).

The BLM NEPA Handbook also states: “You can only define whether an alternative is ‘reasonable’ in reference to the purpose and need for the project.” (p. 50)

The BLM’s purpose for the project is defined by a series of broad resource management policies and objectives contained in the 1996 RGFO Resource Management Plan (RMP), as well as several other laws and regulations. The BLM’s purpose for pursuing this action is the potential opportunity to advance several RMP objectives and/or decisions as follows:

- **Recreation Management 1-82.** Recreation will be managed to provide for: a variety of recreational opportunities and settings; additional opportunities for mountain biking, hiking, off-highway vehicle use, interpretation, and horseback riding; facility development will be accomplished to reduce user conflicts and to improve visitor health and safety.
- **Recreation Management 1-83.** Recreation will be managed intensively in the special recreation management areas.
- **Recreation Management 1-86.** Various actions will occur to enhance recreation: river corridor and upland recreational opportunities emphasizing a balance between resource protection and tourism.
- **National Recreation Area 1-87.** River corridor recreation values will be managed, as guided in any Congressional act, to establish an NRA.
  - Extensive enhancement of recreational opportunities.
  - Enhancement of regional tourism opportunities.

### Need for Action

The applicant has submitted a written proposal for a land use authorization to construct and display a proposed work of art titled *Over The River™*, pursuant to Section 302 of FLPMA, using noncompetitive permit procedures as provided in regulations at 43 CFR 2920. This application creates a need for the BLM to review the proposal, make a decision on whether or not to approve the application, and determine under what conditions the project should proceed, if approved. The BLM action on this land use proposal would be the issuance of a land use authorization for the proposed non-federal use of public lands.

In addition, the process was guided by a series of key assumptions:

- The OTR project is a unique proposal that falls outside the normal range of activities on BLM and other federal lands. As such, it presents some unique challenges to the EIS process.

- The EIS team can explore panel placement options, but cannot reasonably engage in a redesign of the project or identify new panel locations.
- Similarly, the EIS team cannot modify other design elements, e.g., fabric color, type of materials, etc. unless necessary to solve a resource conflict.
- Introducing a range of alternatives unrelated to the OTR proposal would complicate the analysis and obscure the central issues.
- Developing a range of alternatives is not a static process; not all project issues, mitigation strategies, etc. can be fully fleshed out at the beginning.

## **1.2 Review of Scoping Comments**

All public and agency scoping comments received on the OTR proposal were reviewed to identify any specific suggestions or recommendations that would inform the alternative development and analysis process. The majority of comments that related to project design or alternatives focused on suggested mitigation measures rather than unique considerations around which to develop a stand-alone alternative.

## **1.3 Project Components**

Based on the review of scoping comments, several common themes regarding alternative development and design emerged from the scoping comments:

- Spatial/Geographical – Considers alternative locations for the project and/or components of the project.
- Temporal – Considers alternative timing for the project and/or components of the project.
- Transportation – Considers alternative modes of viewing, constructing, or operating the project and/or components of the project.
- Visitation Management – Considers alternative methods of managing visitors in terms of the location of staging areas and other strategies to manage visitor use.

## **1.4 Cooperating Agency Involvement**

A series of meetings was held with all Cooperating Agencies to obtain input on alternatives, and to identify issues and evaluation criteria that should be used in developing and screening alternatives. In general, the meetings were used to seek input on the overall approach used to develop alternatives, including specific project components, evaluation criteria, and interpretation of results.

Additionally, the following agencies and/or departments were contacted to gather information for the Analysis of the Management Situation Report. Much of the information gathered was relevant to the alternatives development process:

- Fremont and Chaffee County law enforcement agencies
- Fremont and Chaffee County fire districts and fire protection entities
- Fremont and Chaffee County ambulance and emergency services

- Fremont County search and rescue
- Fremont, Chaffee, and Custer County planning departments
- Fremont and Chaffee County Offices of Emergency Management
- Fremont and Chaffee County Environmental Health Officer
- Fremont County Weed Control Manager
- City of Canon City
- City of Salida

### 1.5 Project Elements – “Long List”

For each of the four primary project components, a comprehensive list of potential design or physical solutions was developed. The list considered options that had been previously identified by OTR, as well as other options that were reasonable and responded to known issues or concerns identified through scoping or meetings with cooperating and other agencies.

#### Panel Placement

- **No action** – No panels.
- **10.4 miles of panels at 9 sites** (*Artists’ original proposal*): The OTR proposed work of art was originally designed to include 10.4 miles of fabric panels suspended over the Arkansas River at 9 different areas within a 46-mile stretch of river. This design included longer areas and an additional area at Five Points/Sheep Basin. Based on information and guidance provided by the BLM and Colorado Department of Wildlife (CDOW), the area at Five Points/Sheep Basin was identified as a major sheep watering hole, and fabric panels were eliminated to avoid potential impacts to bighorn sheep. (2007 Sato Report, Section 4.3.6)
- **7.7 miles of panels at 7-9 sites** (*Artists’ modified proposal*): To mitigate impacts to bighorn sheep, the OTR proposed work of art was redesigned to include only 7.7 miles of fabric panels. The Artists agreed to reduce this design further to address recreation and public safety concerns at locations where rescues frequently occur. Elimination of these fabric panels enhances water rescue efforts. In addition, because of public safety concerns, several sections of fabric panels were eliminated near County Line, where it was determined that overhead power lines presented a potentially hazardous situation. (2007 Sato Report, Section 4.3.6)
- **5.9 miles at 8 sites** (*Artists’ Proposed Action*): This is the Artists’ Proposed Action. This element would include approximately 5.9 miles of panels at 8 different sites in the project area.
- **4.6 miles at 5 sites** (*Remove all panels west of Texas Creek*): The Artists’ Proposed Action was reduced to address Cooperating Agency concerns regarding panel placement west of Texas Creek. Fremont and Chaffee County concerns were expressed regarding impacts to residents in more populated areas of the canyon during all project phases. CDOT expressed safety concerns in the Tunnel section. This option would alleviate construction disturbances and some/most exhibition phase traffic from populated areas; however, removal of all panels west of Texas Creek would not alleviate commuter impacts for eastbound commuters.
- **3.4 miles at 8 sites** (*“Surgical” approach due to site-specific concerns*): The element is based on the artists’ 5.9-mile panel configuration; however, this element uses a strategic and selective

approach to removing certain panels to benefit bighorn sheep populations. Other species, including migratory birds and bats were also considered. The approach to developing this alternative is described in more detail in Attachment 1.

- **Approximately 1.3 miles at 4 sites** (*Remove all panels from the ACEC*): The Artists' Proposed Action was reduced to eliminate panels from the Arkansas Canyonlands ACEC due to BLM concerns regarding the protection of the ACEC. The ACEC was designated to protect, enhance, and interpret the significant scenic, historic, and archaeological values; the threatened and endangered peregrine falcon; key raptor habitat area; bighorn sheep habitat; and important fisheries. Due to the potential for unresolvable impacts to bighorn sheep, an option that avoids the ACEC was carried forward for further analysis.

### Transportation Options

- **No action** – No exhibition, no additional visitors to the US 50 corridor.
- **Unmanaged personal vehicle access** – Visitors would use US 50 without changes or roadway management.
- **Add new lanes to US 50** – Build additional lanes to expand US 50 so “viewing” opportunities away from through traffic would be available in panel locations. Exhibition visitors would be allowed access to these additional lanes to view the project.
- **Close US 50 to through traffic during event** – Close US 50 to through traffic, allowing exclusive visitor access to the Exhibition via personal vehicles. Controlled access would be provided for local property owners, residents, and business operators only.
- **One way (westbound) US 50 during event** – Close US 50 to eastbound traffic and restripe it for westbound travel from Parkdale (Junction FCR 3) to Texas Creek (Junction SH 69). Detours would be set up for vehicles wanting to travel eastbound from Texas Creek to Parkdale. Eastbound detours would use FCR 1A, SH 69, SH 96, and SH 67 via Florence.
- **Exclusive transit access only** – Provide transit only access to the project corridor. Project visitors must use transit to view the exhibition areas. Visitors would board a bus in a designated area and be shuttled to and from predetermined viewing areas. Only local traffic would be allowed access to the corridor. Rail service could also be provided.
- **Pilot car system** (all vehicles) – Provide visitors with an opportunity to see the Exhibition from their personal vehicles with pilot cars guiding platoons of vehicles starting and ending at designated areas. The pilot cars would lead the platoon through the corridor to and from predetermined viewing areas. Local traffic and visitors would be allowed open access to the corridor, but the platoon would get exclusive access to certain locations. Vehicle occupants would be permitted to get out of their vehicles at selected stopping points for limited time periods.
- **Wave starts/viewing windows** – Provide visitors with a designated window of time when they could be released from the Parkdale parking lot in their personal vehicles to view the art in the corridor, while holding westbound through traffic during the release of visitors. This approach provides some separation of visitors and through traffic, and manages travel out of the Parkdale area.
- **Managed personal vehicle access w/ NO transit** (all pullouts within ½ mile of panels are closed to vehicles) (Artists' Proposed) – Visitors would use US 50 with various management techniques

to keep people moving through the Exhibition corridor. Management techniques could include flagging, uniform traffic control, concrete barriers, static signs, variable message signs, channelizing devices such as cones and barrels, and special (temporary) pavement markings.

- **Managed personal vehicle access WITH transit** (all pullouts within ½ mile of panels are closed to vehicles)
- **Passenger rail through project area** – Allow visitors to see the Exhibition from railcars with an extension of the Royal Gorge passenger rail system to the western end of the Exhibition. Project visitors would be allowed to view the project from their railcar only. (See also Passenger rail up to Pinnacle Rock.)
- **Passenger rail up to Pinnacle Rock** - Allow visitors to see the exhibition from railcars with an extension of the Royal Gorge passenger rail system to the western end of the Parkdale Exhibition area.
  - The current Royal Gorge rail service stops and reverses direction in close proximity to the Parkdale Recreation site, which is near the eastern end of the proposed fabric panel installation at Parkdale. The extension to Pinnacle Rock would be approximately three miles. The extension to serve the most western fabric panel installation would be approximately 45 miles.
- **Supplemental Bus Service** – Provide visitors a guided experience in buses starting and ending at designated areas. These buses would be allowed exclusive access into designated Exhibition areas. Local traffic would be allowed open access to the corridor. Bus occupants would be permitted to get out at selected stopping points for limited time periods.
- **Organized air/helicopter tours** – Allow visitors to view the entire project by helicopter or aircraft consistent with existing aviation requirements.
- **Unmanaged bicycle use** – Allow open bicycle access to US 50 throughout the Exhibition period.
- **Managed bicycle events** – Provide specific dates and times for exclusive bicycle access along US 50 and the Exhibition areas. Bicycles would be allowed access to predetermined viewing areas. Local motorized traffic would not be allowed access to the corridor during the bicycle events.
- **Organized commercial rafting** – Allow normal or “normal plus special event” Arkansas River rafting opportunities through the Exhibition areas.

### Visitor Management Strategies

- **No Action** – No additional visitation to the project area.
- **Allow pedestrian use of UPRR** – Allow visitors to exit their vehicles and travel the UPRR right of way by foot to access panel locations and viewing areas.
- **Allow use of informal pull-outs for viewing** – Allow passenger vehicles to pull off of U.S. Highway 50 into informal pull-outs on the highway shoulder.
- **Create parking areas for viewing using passing lanes (w/ pilot cars)** – Where passing lanes exist on U.S. Highway 50 (creating a third-lane), construct temporary concrete barricades to section off these lanes for visitors to stop, exit their vehicles, and view the art with the assistance of lead and rear pilot cars



- **Provide staging area/visitor info center at Parkdale w/o bridge upgrade** (Artists' Proposed Action) – Provide temporary staging area and visitor information on the north side of the Arkansas River at Parkdale. Access to the Parkdale visitor center would require crossing the river via the existing one-lane Parkdale bridge.
- **Provide staging area/visitor info center at Parkdale, rebuild bridge or install temporary bridge** - Provide temporary staging area and visitor information on the north side of the Arkansas River at Parkdale. Access to the Parkdale visitor center would require crossing the river via a new or temporary bridge.
- **Provide staging area/visitor info center at Parkdale, on alternative site(s)** - Provide temporary staging area and visitor information on the south side of the Arkansas River in the vicinity of Parkdale. Access to the Parkdale visitor center would not require a river crossing.
- **Provide staging area/visitor info center at Texas Creek w/o bridge upgrade** - Provide temporary staging area and visitor information on the north side of the Arkansas River at Texas Creek. Access to the Texas Creek visitor center would require crossing the river via the existing one-lane bridge.
- **Provide staging area/visitor info center at Texas Creek, rebuild bridge or install temporary bridge** - Provide temporary staging area and visitor information on the north side of the Arkansas River at Texas Creek. Access to the Texas Creek visitor center would require crossing the river via a new or temporary bridge.
- **Provide staging area/visitor info center at Texas Creek, on alternative site(s)** - Provide temporary staging area and visitor information on the south side of the Arkansas River in the vicinity of Texas Creek. Access to the Texas Creek visitor center would not require a river crossing.
- **Provide staging/visitor info center area east of Canon City** - Provide temporary staging area and visitor information east of Canon City with existing direct access to U.S. Highway 50.

Visitor management strategies and transportation demand management (TDM) overlap to some degree. TDM strategies are designed to shift peak period transportation demand to off peak periods or to reduce overall demand. The emphasis of TDM strategies during the planning process would be on those strategies that would shift peak (weekend - daytime) demand into the weekday periods. TDM would apply most appropriately to the Managed personal vehicle access w/ NO Transit alternative. Here are some possible TDM strategies for that alternative:

1. Public information encouraging weekday visitation (traditional and online methods)
2. Enhanced opportunities for visitors on weekdays (special times for stopping in your personal vehicle when traffic volumes are expected to be low)

These strategies will be carried forward for analysis in the EIS.

### Temporal Considerations

Alternative temporal variations were considered for the Installation/Construction and Exhibition phases only. Demobilization/restoration efforts would be hard to confine to an explicit amount of time (e.g., 1-year) and while still ensuring adequate restoration and clean-up.

The majority of the temporal considerations for the Construction/Installation and Exhibition phases are self-explanatory. Where necessary, additional clarification has been included.

### ***Exhibition Phase***

- **No Action** – No installation, no viewing.

#### *Duration*

- **Two-week exhibition window;**
- **Extended viewing period** (consider total exhibition duration of up to 3 weeks)
- **Extended viewing period** (consider total exhibition duration of >3 weeks)
- **Compressed viewing period** (consider total exhibition duration of <2 weeks)

#### *Season*

- **August** (Artists' Proposed Action)
- **Earlier viewing period** (e.g., beginning June 21-July 31)
- **Later viewing period** (late August to September 21)

### ***Construction Phase***

- **No Action.**
- **Two-year construction period** with seasonal avoidance for bighorn sheep, April 15-June 30 (Artists' Proposed Action).
- **One-year, compressed construction period** with seasonal avoidance for bighorn sheep, April 15-June 30.

## **1.6 Screen One Criteria: Fatal Flaw Analysis**

### **Screen One Approach**

Once the “long list” of project elements had been completed, they were screened against a series of evaluation criteria to determine if they were viable to be carried forward. The screening criteria consisted of five basic fatal flaw considerations:

- Precluded by legal or other regulatory conflicts
- May create a severe, “un-mitigatable” resource conflict (Does the option create a severe resource conflict that cannot be avoided, minimized, or mitigated?)
- May create a severe, “un-mitigatable” safety hazard (Are safe conditions provided in the canyon corridor for all related activities, travel, and visitors/personnel?)
- May result in unacceptable congestion or delays on US 50 (Is the reasonable movement of motor vehicles accommodated on the road network, including but not limited to canyon residents, emergency response vehicles, commercial traffic, non-viewing public?)

- Infeasible due to costs, uncertainties, or other practical limitations (Can the element be reasonably implemented and effectively managed with a practical degree of certainty?)

## **1.7 Screen One Results**

### **Panel Placement**

All panel placement elements passed Screen One; no fatal flaws were identified. Therefore, the following elements were carried forward to Screen Two:

- 10.4 miles of panels at 9 sites (Artists' original proposal)
- 7.7 miles of panels at 7-9 sites (Artists' modified proposal)
- 5.9 miles of panels at 8 sites (Artists' proposed action)
- 4.6 miles of panels at 5 sites (Remove all panels west of Texas Creek)
- 3.4 miles of panels at 8 sites ("Surgical" approach due to site specific issues)
- 1.3 miles of panels at 4 sites (Remove all panels from the ACEC)

### **Transportation Option Elements**

Table 1 displays the results of applying the evaluation criteria to all transportation elements. Table 2 provides a discussion of the results.

**Table 1. Screen One: Transportation Options, Fatal Flaws**

<b>TRANSPORTATION OPTION ELEMENTS</b>	<b>PRECLUDED BY LEGAL OR OTHER REGULATORY CONFLICTS</b>	<b>MAY CREATE A SEVERE RESOURCE CONFLICT</b>	<b>MAY CREATE A SEVERE SAFETY HAZARD</b>	<b>MAY RESULT IN UNACCEPTABLE CONGESTION OR DELAYS ON US 50</b>	<b>INFEASIBLE DUE TO COSTS, UNCERTAINTIES, OR OTHER PRACTICAL LIMITATIONS</b>
NO ACTION					
UNMANAGED PERSONAL VEHICLE ACCESS					
ADD NEW LANES/ADD NEW PAVEMENT TO US 50					
CLOSE US 50 DURING THE EXHIBITION					
EXCLUSIVE TRANSIT ACCESS ONLY					
PILOT CAR SYSTEM (ALL VEHICLES)					
WAVE STARTS/VIEWING WINDOWS					
ONE WAY (WESTBOUND) US 50 DURING THE EXHIBITION					
MANAGED PERSONAL VEHICLE ACCESS W/ NO TRANSIT PACKAGE (PROPOSED)					
MANAGED PERSONAL VEHICLE ACCESS WITH TRANSIT PACKAGE					
PASSENGER RAIL THROUGH PROJECT AREA					
PASSENGER RAIL THROUGH UP TO PINNACLE ROCK					
SUPPLEMENTAL BUS SERVICE					
ORGANIZED AIRPLANE/HELICOPTER TOURS					
UNMANAGED BICYCLE USE					
MANAGED BICYCLE EVENTS					
ORGANIZED COMMERCIAL RAFTING					

 = CONFLICT WITH EVALUATION CRITERIA

**Table 2. Screen One: Transportation Options, Discussion of Results**

TRANSPORTATION OPTION ELEMENTS	DETERMINATION DISCUSSION
No ACTION	<b>REQUIRED</b>
UNMANAGED PERSONAL VEHICLE ACCESS	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option leaves current roadway and operational conditions along US 50 unchanged during the Exhibition period. Anticipated traffic demand during the event and the unusual driving conditions created by a roadside attraction would create unacceptable capacity and safety conditions without special efforts to manage travel on US 50.
ADD NEW LANES TO US 50	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option involves building additional lanes and/or new pavement to expand US 50 so “viewing” lanes would be available in panel locations. Visitors would be allowed access to these additional lanes to view the project. This option was eliminated based on implementation as US 50 is substantially constrained by topography. An improvement of this type would be costly and would present the potential to create various adverse environmental effects. The costs for these long-term improvements would be substantial and inconsistent with the short-term need created by the project.
CLOSE US 50 TO THROUGH TRAFFIC DURING EVENT	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option would close US 50 to through traffic allowing exclusive visitor access to the Exhibition via personal vehicles. Measures would be included to allow access to landowners, residents and business operators. US 50 is a major federal facility and important east/west travel corridor. Closure of US 50 and the use of lengthy detours for a short display period of 1-4 weeks would present potential conflicts with federal laws and regulations associated with interstate transportation and commerce. Closure of US 50 would substantially delay and limit mobility and access in the project corridor even with the use of a permitting program. The use of lengthy detours for through traffic would increase safety risks, especially for trucks on roads built to lower standards than US 50. Upgrading these roads is anticipated to be too costly.
ONE WAY (WESTBOUND) US 50 DURING EVENT	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option would limit US 50 to one lane westbound from Parkdale (Junction FCR 3) to Texas Creek (Junction SH 69). US 50 would be closed to eastbound traffic and restriped to allow US 50 to operate as a westbound only facility. Detours would be set-up for vehicles wanting to travel eastbound from Texas Creek to Parkdale. Eastbound detours would use FCR 1A, SH 69, SH 96, and SH 67 via Florence. US 50 is a major federal facility and important east/west travel corridor. Closure of one lane of US 50 and the use of lengthy detours for a short display period of 1-4 weekst would present potential conflicts with federal laws and regulations associated with interstate transportation and commerce. Closure of US 50 would substantially delay and limit mobility and access in the project corridor even with the use of a permitting program. The use of lengthy detours for through traffic would increase safety risks, especially for trucks on roads built to lower standards than US 50. Upgrading these roads is anticipated to be too costly.
EXCLUSIVE TRANSIT ACCESS ONLY	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option would implement a system where project visitors must use transit to view the Exhibition. Visitors would board a bus or train in a designated area and be shuttled to and from predetermined viewing areas. This option presents similar conditions to the Close US 50 alternative. Restricting access to a federal/state highway would present potential conflicts with federal laws and regulations associated with interstate transportation and commerce.

TRANSPORTATION OPTION ELEMENTS	DETERMINATION DISCUSSION
PILOT CAR SYSTEM (ALL VEHICLES)	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>This option would provide visitors with an opportunity to see the Exhibition from their personal vehicles with pilot cars leading and following platoons of vehicles starting and ending at designated areas. The pilot cars would lead the platoon through the corridor to and from predetermined viewing areas. Local traffic and visitors would be allowed open access to the corridor, but each platoon would get exclusive access to certain locations. Vehicle occupants would be permitted to get out of their vehicles at selected stopping points for limited time periods. Based on estimated visitation, platoons would need to be over 200 vehicles long to accommodate visitor demand in the peak hour. This length would be unmanageable at the starting, stopping, and end points of the pilot car service. Optimizing platoon performance by limiting the length to a manageable number of vehicles (500 to 600 feet, which would accommodate 20 to 25 vehicles at 20 to 30 minute intervals) would limit visitor access to about 190 persons (assuming 2.5 passengers per vehicle) per hour (75 cars per hour) or about 5.7 percent of peak hour travel demand (1300 vehicles per hour). This benefit is insufficient to reach acceptable levels of service on US 50.</p>
WAVE STARTS/VIEWING WINDOWS	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>Wave starts are a lot like a pilot car system without the support of a pilot car in front and in the back of the platoon of vehicles. Like with pilot cars, wave starts would limit the amount of visitors that are allowed to use US 50 within any given window of time or wave. This would spread the peak demand over a longer time of the day compared to unmanaged visitor departure.</p> <p>The wave start concept would operate in a manner similar to work zones where through traffic is required to stop for an extended period of time while construction activities such as blasting or opposite direction traffic is allowed to pass. A wave start duration of 20 minutes with five minute separation was used because that is the common wait time CDOT uses in construction situations. There is an operational consequence of this concept. The consequence is that the capacity of the road available to serve the demand would be significantly reduced. It was determined that the capacity would be 9,800 vehicles per day, far less than the anticipated demand of 15,000 vehicles per day. This gap would cause peak period demand to exceed wave capacity causing queuing at Parkdale.</p>
MANAGED PERSONAL VEHICLE ACCESS W/NO TRANSIT (ALL PULLOUTS WITHIN ½ MILE OF PANELS ARE CLOSED TO VEHICLES) (ARTISTS' PROPOSED)	<p><b>ADVANCED TO SCREEN TWO</b></p> <p>This option involves the use of various techniques to manage high traffic volumes along US 50. The primary technique would be to prevent vehicles from stopping within ½ mile of any panel location and measures to make sure vehicles don't stop in a lane or along the shoulder. At peak periods, key intersections (Parkdale and Texas Creek) would operate with substantial delays Levels of Service F unless additional techniques are used to handle the traffic or reduce peak period demand (Travel Demand Management). Details about various management strategies are needed to refine this alternative.</p>
MANAGED PERSONAL VEHICLE ACCESS WITH TRANSIT (ALL PULLOUTS WITHIN ½ MILE OF PANELS ARE CLOSED TO VEHICLES)	<p><b>ADVANCED TO SCREEN TWO</b></p> <p>This option combines various measures to manage personal vehicle access with various transit possibilities designed to address peak period demand. Three transit possibilities are evaluated:</p> <ol style="list-style-type: none"> <li>1. Passenger rail through project area</li> <li>2. Passenger rail up to Pinnacle Rock</li> <li>3. Supplemental bus service</li> </ol> <p>The options are discussed separately in the following discussions.</p>
PASSENGER RAIL THROUGH PROJECT AREA	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>Passenger rail service extending the existing Royal Gorge service to Salida would require a third party to modify their ongoing passenger rail service from Canon City through Royal Gorge to a location further up the Arkansas River canyon. Consultation with Union Pacific indicates that track bed, rail, signal, and other improvements and corresponding permitting would need to be completed before the anticipated route would be ready for service.</p>

TRANSPORTATION OPTION ELEMENTS	DETERMINATION DISCUSSION
	<p>The Salida destination would allow passengers to see all of the Exhibition areas. However, Union Pacific has stated that rail passengers would not be allowed to exit their railcars at any point.</p> <p>The value provided by this rail service would be to obtain a view of both attractions (Royal Gorge and the Exhibition) with one ticket, and avoidance of most of the motor vehicle traffic and crowds along US 50. Views from the railcars would be best from one side of the railcar only because the route is a one way alignment with a reverse operation on the way back (no turnaround). However, large windows and “open air” railcars would provide desirable views.</p> <p>Existing 2009 ticket prices for adults and children range from \$32.95 to \$57.95 and \$21.50 to \$46.50, respectively. There are various classes of service offering varying levels of food, drink and entertainment. High end services can cost \$110 per person. The potential for an “Over the River” class of service or ticket package would be expected to cost considerably more and extend the trip duration.</p> <p>The Salida option would add a considerable amount of time and cost to each trip (see Table 3). Extended trip durations could reduce the number of train departures per day. This might impact trip scheduling and could reduce the number of trips per day.</p> <p>Some of the critical questions regarding the management of this option include:</p> <ul style="list-style-type: none"> <li>• How much would the railroad improvements and permitting process cost?</li> <li>• Who would be responsible for those costs relative to the short-term and long- term benefits that they would provide?</li> <li>• Does it make economic and management sense for the railroad operator to extend the service for a two to three week Exhibition period?</li> <li>• Do any long-term extended run options make sense for the operator?</li> <li>• How many exhibition visitors could be drawn away from seeing the exhibition via motor vehicle in the first two weeks of August when the existing service is already at peak demand levels?</li> <li>• Would the extended service accommodate “Exhibition only” demand or would it simply add value or options available to Royal Gorge rail visitors who would be riding the train during the Exhibition year with or without the Over the River event?</li> </ul>
PASSENGER RAIL THROUGH PROJECT AREA (CONT.)	<p>The passenger rail option to Salida has been eliminated from further consideration because the improvements from the current turnaround to Salida would include substantial track bed, rail, and signal upgrades that would be cost prohibitive, especially since there would be substantial difficulties securing permission from Union Pacific to use of these tracks for long-term passenger rail service (see Table 3).</p> <p>The passenger rail option to Salida would be questionable for two primary reasons:</p> <ol style="list-style-type: none"> <li>1. Required improvements from the current turnaround to the anticipated Parkdale turnaround would involve approximately 45 miles of track bed, rail, and signal upgrades. Rough estimates define the cost for these improvements at \$40,500,000. * This estimate is not based on an extensive examination of the conditions of the track bed, rail or systems. The estimate is based on an assumption that track would need upgraded and that the addition of central traffic control would be required.</li> <li>2. The net change in motor vehicle use of US 50 during the exhibition phase of the project that could be attributed to passenger rail service to the Exhibition area would be limited and low.</li> </ol>

TRANSPORTATION OPTION ELEMENTS	DETERMINATION DISCUSSION
	<p>There are up to 17 cars available on the route. Each car has a passenger limit, but the railcar limits vary. Assuming 17 railcars and 50 persons per railcar, a total of 850 people could ride the rails to see Royal Gorge and the exhibition. Three departures are offered per day with an additional evening trip. The maximum number of passengers per day would be approximately 3,400 per day. This equates to 1,360 vehicles per day relative to 1300 vehicle per hour at the peak hour on a weekend. With visitor estimates from Appendix J2.1.2 to the J.F. Sato April 2007 "Design and Planning" report, there are 38,000 daily visitors anticipated on a weekend. This is expected to generate approximately 14,000 vehicles trips on a Saturday or Sunday. Consequently, if 100 percent of the train riders chose to see the exhibition by train only and did not visit the corridor in their vehicle, the maximum reduction of visitor demand on US 50 would be about 24 percent of estimated daily visitation on a weekend. This would be substantial, but the actual percentage would likely be far lower for the following reasons:</p> <ul style="list-style-type: none"> <li>• Demand for existing seats on trains in August would be expected to be high with or without the Over the River Exhibition. Special event ticket pricing would need to be substantially higher than normal August pricing to cause "disinterested" riders to shift their visits to other timeframes. A 100 percent shift would be highly unlikely.</li> <li>• Some portion of visitors using the train would also choose to see the remainder of the Exhibition via motor vehicle.</li> </ul> <p>Many factors imply that the cost effectiveness of providing rail transit to Salida would be relatively low and questionable.</p>
PASSENGER RAIL UP TO PINNACLE ROCK	<p><b>ADVANCED TO SCREEN TWO</b></p> <p>This option would limit the rail extension described previously to Pinnacle Rock located approximately three miles from the point where the existing service changes directions. The Pinnacle Rock option would allow visitors to see the Parkdale area only. The rough cost estimate for this option would be \$2,700,000.* This cost is substantially lower than an extension to Salida and would result in far lower ticket price increases. However, it would also provide a limited view of the Exhibition, thereby, increasing the potential number of rail visitors who might ride the train and choose to see the remaining areas via personal vehicle trips on US 50. Many details would need to be resolved to assure that this service would have benefits are is feasible for the operator.</p>
SUPPLEMENTAL BUS SERVICE	<p><b>ADVANCED TO SCREEN TWO</b></p> <p>This option would provide visitors with a guided experience in buses starting and ending at designated areas. The buses would be allowed into designated areas for exclusive access to certain Exhibition sites. Bus occupants would be permitted to get out of their vehicles at selected stopping points for limited time periods. Local traffic would be allowed open access to the corridor under managed conditions.</p>
ORGANIZED AIR/HELICOPTER TOURS	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>Air tours are feasible, but would not handle a meaningful number of visitors relative to peak period visitor demand. A transportation service of this sort is not precluded nor would it be relied upon to make a difference during the exhibition period.</p>
UNMANAGED BICYCLE USE	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>This option would allow bicycle use during the Exhibition period. Anticipated traffic demand during the event and the unusual driving conditions created by a roadside attraction would create unacceptable bicycle safety conditions.</p>



TRANSPORTATION OPTION ELEMENTS	DETERMINATION DISCUSSION
MANAGED BICYCLE EVENTS	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>Bicycle use during one or more special event may be feasible if the events occur at off-peak hours and on off-peak days. Bicycles can use US 50 under normal circumstances. As exhibition traffic increases, the conflicts between bicycles and motor vehicles will proportionately increase. Optimization of a bicycle component requires further analysis, and would provide an alternative to motor vehicle use. However, a bicycle event will not have a meaningful effect on vehicle travel because most cyclists and/or their traveling companions would travel to and from the event corridor in a motor vehicle and could still elect to view the exhibition before, during, or after the bike event.</p>
ORGANIZED COMMERCIAL RAFTING	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p>This option would be expected as a visitor management strategy, but does not substantially reduce anticipated vehicle traffic along US 50 during the Exhibition so it is not considered a valuable transportation option.</p>

*\*Rough Order of Magnitude Cost Estimate for Railroad Upgrades:*

*Based on consultation with Union Pacific Railroad (UPRR), the track between the current Royal Gorge service turnaround and Salida is in "poor" condition. Because the track does not meet the FRA classification for Class 1 track, it may be referred to as "accepted track" meaning that a track inspection should take place prior to train movement on the track to insure conditions are safe for passage.*

*Passenger rail service on this track would require upgrades to achieve a Class 2 status. The upgrades would be expected to address the following:*

- *Condition of ties and rail*
- *Condition of other track material*
- *Surface conditions*
- *Drainage conditions*
- *Centralized Traffic Control requirements*
- *Condition of turnouts*
- *Crossing protection*

*Class 2 status would allow 25 mile per hour passenger service.*

*The development of an accurate cost estimate for achieving Class 2 requires track inspection and further coordination with UPRR and FRA. The following rough order of magnitude estimate is based on initial consultation with UPRR and familiarity with FRA requirements and typical costs for track upgrades.*

**Table 3. Preliminary Cost Estimates for Rail Service Upgrades.**

UPGRADE*	UNIT COST PER MILE	COST ESTIMATE FOR THE UPGRADE FROM THE CURRENT RAIL SERVICE TURNAROUND TO PINNACLE ROCK	COST ESTIMATE FOR THE UPGRADE FROM THE CURRENT RAIL SERVICE TURNAROUND TO A TURNAROUND LOCATION IN SALIDA
		(3 MILES)	(45 MILES)
RAILROAD TIES @ 1,000 TIES PER MILE	\$45,000	\$135,000	\$2,025,000
TIE PLATES @ 2,000 PLATES PER MILE	\$14,000	\$42,000	\$630,000
ANCHORS @ 2,000 ANCHORS PER MILE	\$3,000	\$9,000	\$135,000
BALLAST @ 600 TONS PER MILE	\$14,400	\$43,200	\$648,000
DRAINAGE IMPROVEMENTS	\$2,000	\$6,000	\$90,000
OTHER	\$21,600	\$64,800	\$972,000
CENTRALIZED TRAFFIC CONTROL*	\$800,000	\$2,400,000	\$36,000,000
<b>TOTAL*</b>	\$900,000	\$2,700,000	40,500,000

\* An investment of approx. \$100,000 per mile should be sufficient to achieve class 2 track without costs for Centralized Traffic Control (CTC). UPRR could also require CTC.

Note: The current cost to construct new main line track with CTC is about \$2 million per mile.

## Visitor Management Strategies

The results of applying the screen one criteria are shown in Table 4. The basis for the results is discussed in Table 5.

**Table 4. Screen One: Visitor Management Strategies, Fatal Flaws**

VISITOR MANAGEMENT STRATEGIES ELEMENTS	PRECLUDED BY LEGAL OR OTHER REGULATORY CONFLICTS	MAY CREATE A SEVERE RESOURCE CONFLICT	MAY CREATE A SEVERE SAFETY HAZARD	MAY RESULT IN UNACCEPTABLE CONGESTION OR DELAYS ON US 50	INFEASIBLE DUE TO COSTS, UNCERTAINTIES, OR OTHER PRACTICAL LIMITATIONS
NO ACTION					
ALLOW PEDESTRIAN VIEWING ALONG UPRR CORRIDOR					
ALLOW USE OF PULL-OUTS ALONG US 50 FOR VIEWING					
CREATE PARKING AREAS FOR VIEWING USING PASSING LANES (W/ PILOT CARS)					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE W/O BRIDGE UPGRADE					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, ON ALTERNATIVE SITE(S)					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK W/O BRIDGE UPGRADE					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE					
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, ON ALTERNATIVE SITE(S)					
PROVIDE STAGING/VISITOR INFO CENTER AREA EAST OF CANON CITY					

 = CONFLICT WITH EVALUATION CRITERIA

**Table 5. Screen One: Visitor Management Strategies, Results Discussion**

<b>VISITOR MANAGEMENT STRATEGIES ELEMENTS</b>	<b>DETERMINATION DISCUSSION</b>
NO ACTION	<b>ADVANCES TO SCREEN TWO</b>
ALLOW PEDESTRIAN VIEWING ALONG UPRR CORRIDOR	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option would allow visitors to use the inactive UPRR rail line paralleling the Arkansas river as a hiking trail to view the project. However, UPRR has indicated that they would not allow this use of their rail line due to liability concerns. It was therefore eliminated from further consideration.
ALLOW USE OF PULL-OUTS ALONG US 50 FOR VIEWING	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  There are multiple pull-out areas along US 50 that are used to access the river for fishing and other recreational activities. Allowing vehicles to park in these areas would increase the likelihood of viewers walking from these points along the highway shoulder to view the panels, thus increasing the potential for accidents. In addition, the movement of vehicles in and out of these areas would have a major adverse effect on traffic flow.
CREATE PARKING AREAS FOR VIEWING USING PASSING LANES (WITH PILOT CARS)	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  The passing lanes on US 50 serve an important function. Closing them to traffic movement during the display period would likely increase congestion and make movement of emergency vehicles more difficult.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE W/OUT BRIDGE UPGRADE	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  The Artists' have proposed a staging area/visitor info center on private land in the Parkdale area that would accommodate up to 900 vehicles. However, CDOT expressed major concerns with the one-lane bridge access to this area. There are multiple issues involved, but impacts on US 50 are paramount. Vehicles wanting to turn into the lot off of US 50, even if limited to right in only turns, may stack up and congest west bound traffic. US 50 is a 2-lane road in this area, and therefore lacks opportunity to create a turn lane. Potential solutions include building a new permanent or temporary bridge or finding an alternative site for the parking area that doesn't require a river crossing.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	<b>ADVANCES TO SCREEN TWO</b>  This option modifies the Artists' Proposed Action to address concerns regarding the one-lane bridge and associated congestion on US 50.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, ON ALTERNATIVE SITE(S)	<b>ADVANCES TO SCREEN TWO</b>  This option modifies the Artists' Proposed Action to address concerns regarding the one-lane bridge and associated congestion on US 50.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK W/OUT BRIDGE UPGRADE	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  The Artists' have proposed two general staging areas and construction of a permanent or temporary 4,000 sq. ft. warehouse/office building for OTR Corp use on BLM land at Texas Creek. There is again a one-lane bridge with possible queuing onto US 50 problems, though it may not be as critical as Parkdale.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	<b>ADVANCES TO SCREEN TWO</b>  This option modifies the Artists' Proposed Action to address concerns regarding the one-lane bridge and associated congestion on US 50. In addition, the bridge has an 11-ton load limit that may limit its utility for the delivery of equipment and materials needed for installation of the project.
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, ON ALTERNATIVE SITE(S)	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  This option modifies the Artists' Proposed Action to address concerns regarding

VISITOR MANAGEMENT STRATEGIES ELEMENTS	DETERMINATION DISCUSSION
	the one-lane bridge and associated congestion on US 50. However, there is no suitable terrain on the south side of the river for an alternative staging area/info center.
PROVIDE STAGING/VISITOR INFO CENTER AREA EAST OF CANON CITY	<b>ADVANCES TO SCREEN TWO</b>  This option was suggested by Fremont County to provide visitors with an area to gather information about their visit before entering anticipated traffic in the canyon.

### Temporal Considerations: Exhibition and Construction Phases

All temporal consideration elements pass Screen One; no fatal flaws were identified for any of the elements. The following elements were therefore carried forward to Screen Two:

#### **Display Period:**

- No Action

#### *Duration*

- Extended viewing period (consider total exhibition duration of up to 3 weeks)
- Extended viewing period (consider total exhibition duration of >3 weeks)
- Two-week exhibition window
- Compressed viewing period (consider total exhibition duration of <2 weeks)

#### *Season*

- First two weeks of August (Artists' Proposed)
- Later viewing period (late August to September 21)
- Earlier viewing period (e.g., beginning June 21)

#### **Construction period:**

- No action
- 2 year construction period w/ seasonal avoidance for bighorn sheep, April 15-June 30 (Proposed)
- Compressed construction period (total duration of <2 years) w/ seasonal avoidance for bighorn sheep, April 15-June 30

## 1.8 Screen Two: Relative Ranking

### Screen Two Approach

Screen One was a simple pass/fail application of coarse screening criteria. Screen Two used a somewhat finer scale approach and ranks project elements according to a best to worst scale. The project element(s) that would best comply with an evaluation criterion were rated 3 and the element(s)

with the lowest compliance were rated 1. A mid-range value of 2 was assigned to those project components that fell in the middle, i.e. they were neither the best nor the worst.

- Each element scored on a scale of 1 to 3 (1=worst among options, 2=mid-range, 3=best among options)
- Lowest possible score = 6, highest possible score = 18
- All criteria must have at least one high score and one low score (e.g., 1's and 3's only) OR all of the same score (e.g., 1's only)
- For some criteria/element combinations, there is no distinction between elements and all elements are given the same score
- To advance, an element must result in a score of 12 or greater; given the possible range, 12 or greater represents a solid, mid-range score

The combined scores were then calculated for each project element considering all of the relative ranking criteria used in Screen Two.

### **Screen Two Criteria**

These include:

- Conflicts with natural resources
- Conflicts with canyon and community residents (e.g., lifestyles, commuting)
- Conflicts with BLM or other jurisdictional management constraints (e.g., UPRR, CDOT, County)
- Conflicts with existing recreational uses or access
- Conflicts with traffic movement or safe operating conditions
- Maintains overall project cohesiveness, intent, or integrity

All of the criteria used in Screen One were also used in Screen Two with one exception. A criterion relating to project cohesiveness and overall intent was added. It was not used in Screen One due to the fact that all variations to the artists' proposal could be considered in conflict with this criterion to some extent and all alternatives would thus be eliminated from further consideration. In Screen Two, the criterion could be rated in a less than/more than fashion without automatically eliminating other options.


## **1.9 Screen One Results**

### **Panel Placement**

The results of applying the Screen Two criteria are displayed in Table 6. A narrative discussion of these results is provided in Table 7.

**Table 6. Screen Two: Panel Placement, Scoring Results**

<b>PANEL PLACEMENT ELEMENTS</b>	<b>CONFLICTS WITH NATURAL RESOURCES</b>	<b>CONFLICTS WITH CANYON AND COMMUNITY RESIDENTS (E.G., LIFESTYLE, COMMUTING)</b>	<b>CONFLICTS WITH BLM OR OTHER JURISDICTIONAL MANAGEMENT CONSTRAINTS (E.G., UPRR, CDOT, COUNTIES)</b>	<b>CONFLICTS WITH EXISTING RECREATIONAL USES AND ACCESS</b>	<b>CONFLICTS WITH TRAFFIC MOVEMENT OR SAFE OPERATING CONDITIONS</b>	<b>MAINTAINS OVERALL PROJECT COHESIVENESS, INTENT, OR INTEGRITY</b>	<b>SCORE/ TALLY</b>
NO ACTION	3	3	3	3	3	1	16
10.4 MILES OF PANELS AT 9 SITES (ARTISTS' ORIGINAL PROPOSAL)	1	1	1	1	1	3	8
7.7 MILES OF PANELS AT 7-9 SITES (ARTISTS' MODIFIED PROPOSAL)	1	1	1	1	1	3	8
5.9 MILES AT 8 SITES (ARTISTS' PROPOSED ACTION)	2	2	1	2	2	3	12
4.6 MILES AT 5 SITES (REMOVE ALL PANELS WEST OF TEXAS CREEK)	2	3	2	2	3	1	13
3.4 MILES AT 8 SITES ("SURGICAL" APPROACH DUE TO SITE-SPECIFIC CONCERNS)	3	2	3	3	2	2	15
~1.3 MILES AT 4 SITES (REMOVE ALL PANELS FROM THE ACEC)	3	2	3	3	3	1	15

 = Element eliminated from further consideration

**Table 7. Screen Two: Panel Placements, Results Discussion.**

PANEL PLACEMENT ELEMENTS	DETERMINATION DISCUSSION
NO ACTION	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p>Inclusion of this alternative is required by NEPA. Nevertheless, the no action alternative was favorably ranked on all evaluation criteria except project cohesiveness and intent.</p>
<p>10.4 MILES OF PANELS AT 9 SITES (ARTISTS' ORIGINAL PROPOSAL)</p>	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources due to numerous, continuous panels located at sites with high potential for conflicts with bighorn sheep habitat. "This design included longer areas and an additional area at Five Points/Sheep Basin. Based on information and guidance provided by BLM and the Colorado Department of Wildlife (CDOW), the area at Five Points/Sheep Basin was identified as a major sheep watering hole and fabric panels were eliminated to avoid potential impacts to big horn sheep." (Section 4.3.6, J.F. Sato, 2007)</p> <p><b>Canyon Residents:</b> This element has high potential to conflict with canyon and community residents and lifestyles due to the extent of panels.</p> <p><b>Jurisdictional:</b> This element has high potential to conflict with jurisdictional or other management constraints. This alternative has among the greatest length of panels in the Arkansas Canyonlands ACEC.</p> <p><b>Recreation:</b> This element has high potential to conflict with existing recreational uses and access to the river due to the extent of panels.</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area due to the extent of the panels.</p> <p><b>Project Integrity:</b> This element was proposed by the artists, therefore it is rated as high.</p>
<p>7.7 MILES OF PANELS AT 7-9 SITES (ARTISTS' MODIFIED PROPOSAL)</p>	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources due to numerous, continuous panels located at sites with high potential for conflicts with bighorn sheep habitat.</p> <p><b>Canyon Residents:</b> This element has high potential to conflict with canyon and community residents and lifestyles due to the extent of panels.</p> <p><b>Jurisdictional:</b> This element has high potential to conflict with jurisdictional or other management constraints. This alternative has among the greatest length of panels in the Arkansas Canyonlands ACEC.</p> <p><b>Recreation:</b> This element has high potential to conflict with recreational uses and access to the river due to the extent of panels as well as conflicts with frequently used swiftwater rescue site(s). "The artists agreed to reduce this design further to address recreation and public safety concerns at locations where rescues frequently occur. Elimination of these fabric panels enhances water rescue efforts. In addition, because of public safety concerns, several sections of fabric panels were eliminated near County Line, where it was determined that overhead power lines presented a potentially hazardous situation." (Section 4.3.6, J.F. Sato, 2007)</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area due to the length of the panels.</p>



PANEL PLACEMENT ELEMENTS	DETERMINATION DISCUSSION
	<p><b>Project Integrity:</b> This element was proposed by the artists, therefore it is rated as high.</p>
<p>5.9 MILES AT 8 SITES (ARTISTS' PROPOSED ACTION)</p>	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources due to continuous panels located at sites with high potential for conflicts with bighorn sheep habitat.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and community residents and lifestyles due to the extent of panels.</p> <p><b>Jurisdictional:</b> This element has high potential to conflict jurisdictional or other management constraints. This alternative has among the greatest length of panels in the Arkansas Canyonlands ACEC.</p> <p><b>Recreation:</b> This element has mid-range potential to conflict with recreational uses and access to the river due to the extent of panels.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area due to the extent of the panels.</p> <p><b>Project Integrity:</b> This element was proposed by the artist, therefore it is rated as high.</p>
<p>4.6 MILES AT 5 SITES (REMOVE ALL PANELS WEST OF TEXAS CREEK)</p>	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources due to continuous panels located at sites with high potential for conflicts with bighorn sheep habitat. However, this element would remove panels at some sensitive bighorn sheep, avian, and/or bat locations.</p> <p><b>Canyon Residents:</b> This element has lower potential to conflict with canyon and community residents and lifestyles due to the limited extent of panels west of Texas Creek; however, this element would not eliminate commuting impacts for canyon residents traveling to-from Canon City.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints due to the extent of panels located within the ACEC; however, this element removes panels from the Tunnel Area which eliminates a CDOT safety concern. This element also reduces potential conflicts with an existing high-voltage transmission line.</p> <p><b>Recreation:</b> This element has mid-range potential to conflict with recreational uses and access to the river due to the extent of panels.</p> <p><b>Traffic/Transportation:</b> This element has lower potential to conflict with traffic movement and safe operating conditions in the area due to the removal of panels west of Texas Creek including the removal of Tunnel Area panels, a CDOT safety concern.</p> <p><b>Project Integrity:</b> This element is rated lower. Per the artists, none of the panel areas defined in the Proposed Action may be further reduced without damaging the integrity, intent, and harmony of the work of art as a whole (Section 4.3.6, J.F. Sato, 2007). The Artists' statement of goals and objectives for project aesthetics indicates, "the artists' design of OTR consists of eight areas of fabric panels.... Together, each element, detail, shape, color, and contrast forms the whole work of art. None of these areas, or sections within areas, may be removed without damaging the integrity, intent, and harmony of the temporary work of art</p>

PANEL PLACEMENT ELEMENTS	DETERMINATION DISCUSSION
	as a whole,” (Detailed Design Proposal, 2008).
3.4 MILES AT 8 SITES ("SURGICAL" APPROACH DUE TO SITE-SPECIFIC CONCERNS)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has lower potential to conflict with natural resources due to the strategic removal of panels at sites with high potential for conflicts with bighorn sheep habitat and/or important avian or bat nesting, roosting, or foraging habitat. This element introduces additional spacing between panels to allow for better wildlife access to the river for drinking and foraging. The additional spacing also helps to minimize potential avian and bat collisions with panels and cables and provides improved access to important nesting, roosting, and foraging habitat along the river.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and community residents and lifestyles. This element removes some panels west of Texas Creek in the more densely populated areas of the canyon corridor; however, this element would not eliminate commuting impacts for canyon residents traveling to-from Canon City.</p> <p><b>Jurisdictional:</b> This element has lower potential to conflict jurisdictional or other management constraints due to strategic removal of panels that would otherwise conflict with BLM resource management objectives, including ACEC objectives. This alternative also reduces potential conflicts with an existing high-voltage transmission line at the County Line panel area.</p> <p><b>Recreation:</b> This element has lower potential to conflict with recreational uses and access to the river due to removal of some panels and increased spacing between panels.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area. The removal of select panels from the area east of Texas Creek may encourage better traffic movement through the lower portion of the canyon.</p> <p><b>Project Integrity:</b> This alternative is designed to minimize potential adverse effects on bighorn sheep, avian, and bat species while retaining much of the artists' proposal. This element has mid-range potential to conflict with the overall project cohesiveness, intent, and integrity. Per the artists, none of the panel areas defined in the Proposed Action may be further reduced without damaging the integrity, intent, and harmony of the work of art as a whole (Section 4.3.6, J.F. Sato, 2007). The Artists' statement of goals and objectives for project aesthetics indicates, "the artists' design of OTR consists of eight areas of fabric panels.... Together, each element, detail, shape, color, and contrast forms the whole work of art. None of these areas, or sections within areas, may be removed without damaging the integrity, intent, and harmony of the temporary work of art as a whole," (Detailed Design Proposal, 2008).</p>
~1.3 MILES AT 4 SITES (REMOVE ALL PANELS FROM THE ACEC)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> The ACEC was created to "...protect, enhance, and interpret the significant scenic, historic, and archaeological values, the threatened and endangered peregrine falcon, key raptor habitat area, bighorn sheep habitat, and important fisheries." This alternative is designed to minimize potential conflicts with the RGFO Resource Management Plan and ACEC objectives. Therefore, this element has lower potential to conflict with natural resources due to the removal of all panels in the ACEC, including panels at sites with high potential for conflicts with bighorn sheep habitat and/or important avian or bat nesting, roosting, or foraging habitat.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and</p>

PANEL PLACEMENT ELEMENTS	DETERMINATION DISCUSSION
	<p>community residents and lifestyles. This alternative removes most panels in the lower canyon and is likely to improve traffic flow, but would not entirely eliminate commuting impacts for canyon residents traveling to-from Canon City.</p> <p><b>Jurisdictional:</b> This element has lower potential to conflict jurisdictional or other management constraints due to the removal of panels that create potential conflicts with BLM resource management objectives, including ACEC objectives.</p> <p><b>Recreation:</b> This element has lower potential to conflict with recreational uses and access to the river due to removal of most panels in the lower canyon.</p> <p><b>Traffic/Transportation:</b> This element has lower potential to conflict with traffic movement and safe operating conditions in the area. The removal of most panels in the lower canyon may encourage better traffic movement.</p> <p><b>Project Integrity:</b> This alternative is designed to minimize potential conflicts with ACEC objectives. This element has high potential to conflict with the overall project cohesiveness, intent, and integrity. Per the artists, none of the panel areas defined in the Proposed Action may be further reduced without damaging the integrity, intent, and harmony of the work of art as a whole (Section 4.3.6, J.F. Sato, 2007). The Artists' statement of goals and objectives for project aesthetics indicates, "the artists' design of OTR consists of eight areas of fabric panels.... Together, each element, detail, shape, color, and contrast forms the whole work of art. None of these areas, or sections within areas, may be removed without damaging the integrity, intent, and harmony of the temporary work of art as a whole," (Detailed Design Proposal, 2008).</p>

## Transportation

As shown in Table 8, all three alternatives will be carried forward for detailed analysis. Specific sub-elements may be eliminated pending further analysis (e.g., passenger rail).

**Table 8. Screen Two: Transportation Options, Results Discussion**

TRANSPORTATION OPTIONS	DETERMINATION DISCUSSION
NO ACTION	<b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b>
MANAGED PERSONAL VEHICLE ACCESS WITH NO TRANSIT PACKAGE; ALL PULLOUTS WITHIN ½ MILE OF PANELS ARE CLOSED TO VEHICLES	<b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b> (This is the artists' proposal.)
MANAGED PERSONAL VEHICLE ACCESS WITH TRANSIT PACKAGE; ALL PULLOUTS WITHIN ½ MILE OF PANELS ARE CLOSED TO VEHICLES	<b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b>  Note: To carry this element forward, the artists will have to commit to providing a minimum level of bus/van service, at a minimum, and/or possibly passenger rail improvement costs. This alternative would provide other transportation options and would potentially reduce congestion on Highway 50.

## Visitor Management

The results of applying the Screen Two criteria are displayed in Table 9. A narrative discussion of these results is provided in Table 10.

**Table 9. Screen Two: Visitor Management Strategies, Scoring Results**

<b>VISITOR MANAGEMENT STRATEGIES ELEMENTS</b>	<b>CONFLICTS WITH NATURAL RESOURCES</b>	<b>CONFLICTS WITH CANYON AND COMMUNITY RESIDENTS (E.G., LIFESTYLE, COMMUTING)</b>	<b>CONFLICTS WITH BLM OR OTHER JURISDICTIONAL MANAGEMENT CONSTRAINTS (E.G., UPRR, CDOT, COUNTIES)</b>	<b>CONFLICTS WITH EXISTING RECREATIONAL USES AND ACCESS</b>	<b>CONFLICTS WITH TRAFFIC MOVEMENT OR SAFE OPERATING CONDITIONS</b>	<b>MAINTAINS OVERALL PROJECT COHESIVENESS, INTENT, OR INTEGRITY</b>	<b>SCORE/TALLY</b>
No ACTION	3	3	3	3	3	1	16
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	1	3	2	2	2	3	13
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, ON ALTERNATIVE SITE(S)	1	3	2	2	3	3	14
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	1	3	2	2	2	3	13
PROVIDE STAGING/VISITOR INFO CENTER AREA EAST OF CANON CITY	1	3	2	3	3	3	15

**Table 10. Screen Two: Visitor Management Strategies, Results Discussion**

VISITOR MANAGEMENT STRATEGIES ELEMENTS	DETERMINATION DISCUSSION
No ACTION	<b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b>
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p>Note: To carry this element forward, the artists will have to commit to rebuilding the Parkdale bridge or a temporary bridge.</p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources. This element would result in new riparian disturbances.</p> <p><b>Canyon Residents:</b> This element has low potential to conflict with canyon and community residents and lifestyles. The information/staging area site itself would not present any direct conflicts to canyon residents or lifestyles. Providing information to visitors in advance of the exhibit may help to reduce congestion, trespassing, or other conflicts.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. This element neither improves upon nor further conflicts with BLM or other jurisdictional management constraints.</p> <p><b>Recreation:</b> This element has mid-range potential to inhibit recreational access to the river. This element neither enhances nor further inhibits recreational access.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area. Rebuilding the bridge at Parkdale does not eliminate the concerns regarding vehicle stacking distances and traffic flow.</p> <p><b>Project Integrity:</b> This is essentially the artists' proposal, see notes above. As such, it is rated as having lower potential to conflict with the overall project integrity and intent.</p>
PROVIDE STAGING AREA/VISITOR INFO CENTER AT PARKDALE, ON ALTERNATIVE SITE(S)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources. This element would result in new site disturbances.</p> <p><b>Canyon Residents:</b> This element has low potential to conflict with canyon and community residents and lifestyles. The information/staging area site itself would not present any direct conflicts to canyon residents or lifestyles. Providing information to visitors in advance of the exhibit may help to reduce congestion, trespassing, or other conflicts.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. This element neither improves upon nor further conflicts with BLM or other jurisdictional management constraints.</p> <p><b>Recreation:</b> This element has mid-range potential to inhibit recreational access to the river. This element neither enhances nor further inhibits recreational access.</p> <p><b>Traffic/Transportation:</b> If constructed on the north side of Highway 50, this element has a lower potential to conflict with traffic movement and safe operating conditions in the area. This element would eliminate the need to build a bridge at Parkdale.</p> <p><b>Project Integrity:</b> This is essentially the artists' proposal. As such, it is rated as having lower potential to conflict with the overall project integrity and intent.</p>
PROVIDE STAGING AREA/VISITOR INFO CENTER AT TEXAS CREEK, REBUILD BRIDGE OR INSTALL TEMPORARY BRIDGE	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p>Note: To carry this element forward, the artists will have to commit to rebuilding the Texas</p>


VISITOR MANAGEMENT STRATEGIES ELEMENTS	DETERMINATION DISCUSSION
	<p>Creek bridge or a temporary bridge.</p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources. This element would result in new riparian disturbances.</p> <p><b>Canyon Residents:</b> This element has low potential to conflict with canyon and community residents and lifestyles. The information/staging area site itself would not present any direct conflicts to canyon residents or lifestyles. Providing information to visitors in advance of the exhibit may help to reduce congestion, trespassing, or other conflicts.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. This element neither improves upon nor further conflicts with BLM or other jurisdictional management constraints.</p> <p><b>Recreation:</b> This element has mid-range potential to inhibit recreational access to the river. This element neither enhances nor further inhibits recreational access.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area. Rebuilding the bridge at Texas Creek does not eliminate the concerns regarding vehicle stacking distances and traffic flow.</p> <p><b>Project Integrity:</b> This is essentially the artists' proposal. As such, it is rated as having lower potential to conflict with the overall project integrity and intent.</p>
PROVIDE STAGING/VISITOR INFO CENTER AREA EAST OF CANON CITY	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources. This element would result in new site disturbances.</p> <p><b>Canyon Residents:</b> This element has low potential to conflict with canyon and community residents and lifestyles. The information/staging area site itself would not present any direct conflicts to canyon residents or lifestyles. Providing information to visitors in advance of the exhibit may help to reduce congestion, trespassing, or other conflicts.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. This element neither improves upon nor further conflicts with BLM or other jurisdictional management constraints.</p> <p><b>Recreation:</b> This element has lower potential to inhibit recreational access to the river. By eliminating the information area at Parkdale traffic flow through the lower canyon may be improved. Also, locating an informational center east of Canon City, provides an opportunity to inform visitors of canyon congestion issues in advance of their entry into the canyon.</p> <p><b>Traffic/Transportation:</b> This element has lower potential to conflict with traffic movement and safe operating conditions in the area. Refer to Recreation notes above.</p> <p><b>1:</b> This element would have no effect on the artists' proposal. As such, it is rated as having low potential to conflict with the overall project integrity and intent.</p>

## Temporal Considerations

The results of applying the Screen Two criteria are displayed in Table 11. A narrative discussion of these results is provided in Table 12.

**Table 11. Screen Two: Temporal Considerations, Scoring Results**

TEMPORAL CONSIDERATIONS ELEMENTS : EXHIBITION PHASE	CONFLICTS WITH NATURAL RESOURCES	CONFLICTS WITH CANYON AND COMMUNITY RESIDENTS (E.G., LIFESTYLE, COMMUTING)	CONFLICTS WITH BLM OR OTHER JURISDICTIONAL MANAGEMENT CONSTRAINTS (E.G., UPRR, CDOT, COUNTIES)	CONFLICTS WITH EXISTING RECREATIONAL USES AND ACCESS	CONFLICTS WITH TRAFFIC MOVEMENT OR SAFE OPERATING CONDITIONS	MAINTAINS OVERALL PROJECT COHESIVENESS, INTENT, OR INTEGRITY	SCORE /TALLY
NO ACTION	3	3	3	3	3	1	16
<b>EXHIBIT DURATION</b>							
EXTENDED VIEWING PERIOD (UP TO 3 WEEKS)	1	1	1	1	2	3	9
EXTENDED VIEWING PERIOD (>3 WEEKS)	1	1	1	1	1	1	6
TWO-WEEK EXHIBITION WINDOW (ARTISTS' PROPOSED)	3	3	3	2	1	3	15
COMPRESSED VIEWING PERIOD (<2 WEEKS)	3	2	3	3	1	1	13
<b>EXHIBIT SEASON</b>							
AUGUST VIEWING PERIOD (ARTISTS' PROPOSED)	2	2	2	3	1	3	13
LATER VIEWING PERIOD (LATE AUGUST TO SEPTEMBER 21)	2	1	2	1	3	3	12
EARLIER VIEWING PERIOD (E.G., BEGINNING JUNE 21)	2	3	2	3	2	3	15

 = Element eliminated from further consideration

**Table 12. Screen Two: Temporal Considerations, Results Discussion**

TEMPORAL CONSIDERATIONS ELEMENTS : EXHIBITION PHASE	DETERMINATION DISCUSSION
NO ACTION	ELEMENT CARRIED FORWARD FOR ANALYSIS
<b>EXHIBIT DURATION</b>	
EXTENDED VIEWING PERIOD (UP TO 3 WEEKS)	<b>ELIMINATED FROM FURTHER ANALYSIS</b>  <b>Natural Resources:</b> This element has high potential to conflict with natural resources. Extending the length of time the panels are in place would increase the potential for adverse effects to aquatic resources and other habitat. For example, a longer display period would

TEMPORAL CONSIDERATIONS ELEMENTS : EXHIBITION PHASE	DETERMINATION DISCUSSION
	<p>increase the potential for avian collisions, prolong the barrier effect for sheep movement, and extend the period of shading vegetation and aquatic habitat.</p> <p><b>Canyon Residents:</b> This element has high potential to conflict with canyon and community residents and lifestyles. Although congestion may diminish somewhat with an extended viewing period, it would be offset by the increased length of time when residents would need to contend with increased traffic and visitation.</p> <p><b>Jurisdictional:</b> This element has high potential to conflict with jurisdictional or other management constraints by extending the period during which the panels are in place and visitation activities reach increased levels. As a result, potential conflicts with management guidelines established for the ACEC would also be prolonged.</p> <p><b>Recreation:</b> This element has high potential to inhibit recreational access to the river by prolonging closure of pull-outs, fishing access, and other uses.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area. Overall, visitation would likely remain similar to that of a two-week display period, but a longer viewing period may spread visitation somewhat and reduce peak congestion.</p> <p><b>Project Integrity:</b> This element would have no effect on the artists' proposal. The Artists' statement of goals and objectives for #4 temporal indicates "a viewing period of three weeks would be acceptable if it is found to mitigate traffic flow concerns by dispersing traffic over a longer period of time." (Detailed Design Proposal, 2008)</p>
EXTENDED VIEWING PERIOD (>3 WEEKS)	<p><b>ELIMINATED FROM FURTHER ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has high potential to conflict with natural resources. Extending the length of time the panels are in place would increase the potential for adverse effects to aquatic resources and other habitat. For example, a longer display period would increase the potential for avian collisions, prolong the barrier effect for sheep movement, and extend the period of shading vegetation and aquatic habitat.</p> <p><b>Canyon Residents:</b> This element has high potential to conflict with canyon and community residents and lifestyles. Although congestion may diminish somewhat with an extended viewing period, it would be offset by the increased length of time when residents would need to contend with increased traffic and visitation.</p> <p><b>Jurisdictional:</b> This element has high potential to conflict with jurisdictional or other management constraints by extending the period during which the panels are in place and visitation activities reach increased levels. As a result, potential conflicts with management guidelines established for the ACEC would also be prolonged.</p> <p><b>Recreation:</b> This element has high potential to inhibit recreational access to the river by prolonging closure of pull-outs, fishing access, and other uses.</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area. Overall, visitation would likely remain similar to that of a two-week display period. A longer viewing period may spread visitation somewhat and reduce peak congestion, but would create high congestion levels on Highway 50 for an extended period of time.</p> <p><b>Project Integrity:</b> This option would extend the viewing period by more than one week. However, this option is not consistent with the Artists' statement of goals and objectives for #4 temporal, which indicates "a viewing period of three weeks would be acceptable if it is found to mitigate traffic flow concerns by dispersing traffic over a longer period of time," (Detailed Design Proposal, 2008).</p>



TEMPORAL CONSIDERATIONS ELEMENTS : EXHIBITION PHASE	DETERMINATION DISCUSSION
TWO-WEEK EXHIBITION WINDOW; FIRST TWO WEEKS OF AUGUST (ARTISTS' PROPOSED)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and community residents and lifestyles. This viewing period would occur at a time when visitor and tourist traffic in the canyon is already high.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. The viewing period would occur at a time when management resources are in high demand (e.g., rangers, law enforcement).</p> <p><b>Recreation:</b> This element has mid-range potential to inhibit or prevent recreational access to the river by closing pull-outs used for fishing access and other uses during a period of high demand.</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area because it would occur at time when visitor and tourist traffic in the canyon is already high.</p> <p><b>Project Integrity:</b> This element would have no effect on the artists' proposal.</p>
COMPRESSED VIEWING PERIOD (<2 WEEKS)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has lower potential to conflict with natural resources.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and community residents and lifestyles. This viewing period would occur at a time when visitor and tourist traffic in the canyon is already high.</p> <p><b>Jurisdictional:</b> This element has lower potential to conflict with jurisdictional or other management constraints. The viewing period would occur at a time when management resources are in high demand (e.g., rangers, law enforcement).</p> <p><b>Recreation:</b> This element has lower potential to inhibit or prevent recreational access to the river by closing pull-outs used for fishing access and other uses during a period of high demand.</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area because it would occur at time when visitor and tourist traffic in the canyon is already high.</p> <p><b>Project Integrity:</b> This element is not consistent with the artists' proposal.</p>
<b>EXHIBITION SEASON</b>	
AUGUST VIEWING PERIOD (ARTISTS' PROPOSED)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources. The viewing period would occur during a less sensitive period for most species.</p> <p><b>Canyon Residents:</b> This element has mid-range potential to conflict with canyon and community residents and lifestyles.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. The proposed viewing period would occur at a time when management demands (e.g., rangers, law enforcement, etc.) are high.</p> <p><b>Recreation:</b> This element has high potential to inhibit recreational access to the river</p>

TEMPORAL CONSIDERATIONS ELEMENTS : EXHIBITION PHASE	DETERMINATION DISCUSSION
	<p>because it would occur at a time when recreational demands are highest.</p> <p><b>Traffic/Transportation:</b> This element has high potential to conflict with traffic movement and safe operating conditions in the area. Traffic volumes are high at this time of year due to recreation use and tourism.</p> <p><b>Project Integrity:</b> This element would have no effect on the artists' proposal. "The artists are receptive to a 14-day viewing period anytime during the summer. Their artistic vision includes the long summer daylight hours and rafters being able to view the fabric from underneath. Therefore, any 14-day period from June 21 through September 21 is acceptable to the purpose and need for OTR." (Detailed Design Proposal, 2008)</p>
LATER VIEWING PERIOD (LATE AUGUST TO SEPTEMBER 21)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources.</p> <p><b>Canyon Residents:</b> This element has high potential to conflict with canyon and community residents and lifestyles. Overall, this element would potentially diminish congestion in the canyon by scheduling the viewing period for a time when there is less visitation or tourism in the canyon. However, this element would occur during the school year and may conflict with local school bus movements.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints.</p> <p><b>Recreation:</b> This element has lower potential to inhibit recreational access to the river because it would occur at a time when recreational demands are lower.</p> <p><b>Traffic/Transportation:</b> This element has lower potential to conflict with traffic movement and safe operating conditions in the area. The proposed viewing period would occur at a time when seasonal recreation or other tourist traffic is reduced in the canyon. However, this element would occur during the school year and may conflict with local school bus movements.</p> <p><b>Project Integrity:</b> This element would have no effect on the artists' proposal. "The artists are receptive to a 14-day viewing period anytime during the summer. Their artistic vision includes the long summer daylight hours and rafters being able to view the fabric from underneath. Therefore, any 14-day period from June 21 through September 21 is acceptable to the purpose and need for OTR." (Detailed Design Proposal, 2008)</p>
EARLIER VIEWING PERIOD (E.G., BEGINNING JUNE 21)	<p><b>ELEMENT CARRIED FORWARD FOR ANALYSIS</b></p> <p><b>Natural Resources:</b> This element has mid-range potential to conflict with natural resources. The viewing period would occur during a less sensitive period for most species.</p> <p><b>Canyon Residents:</b> This element has lower potential to conflict with canyon and community residents and lifestyles.</p> <p><b>Jurisdictional:</b> This element has mid-range potential to conflict with jurisdictional or other management constraints. The proposed viewing period would occur at a time when management demands (e.g., rangers, law enforcement, etc.) are lower.</p> <p><b>Recreation:</b> This element has lower potential to inhibit recreational access to the river because it would occur at a time when recreational demands are lower.</p> <p><b>Traffic/Transportation:</b> This element has mid-range potential to conflict with traffic movement and safe operating conditions in the area.</p>

TEMPORAL CONSIDERATIONS	
ELEMENTS :	DETERMINATION DISCUSSION
EXHIBITION PHASE	
	<b>Project Integrity:</b> This element would have no effect on the artists' proposal. "The artists are receptive to a 14-day viewing period anytime during the summer. Their artistic vision includes the long summer daylight hours and rafters being able to view the fabric from underneath. Therefore, any 14-day period from June 21 through September 21 is acceptable to the purpose and need for OTR." (Detailed Design Proposal, 2008)

The Construction Phase temporal considerations do not require a second screening. Three alternatives will be carried forward for detailed analysis.

### 1.10 Final Alternative Elements

Table 13 presents all elements carried forward from Screen Two for further analysis.

**Table 13. All Elements Carried Forward for Analysis.**

PANEL PLACEMENT	TRANSPORTATION OPTIONS
<ul style="list-style-type: none"> <li>No Action</li> <li>5.9 miles of Panels</li> <li>4.6 miles of Panels</li> <li>3.4 miles of Panels</li> <li>1.3 miles of Panels</li> </ul>	<ul style="list-style-type: none"> <li>No Action</li> <li>Managed Personal Vehicle Access with NO Transit Package; all pullouts within ½ mile of panels are closed to vehicles</li> <li>Managed Personal Vehicle Access with Transit Package; all pullouts within ½ mile of panels are closed to vehicles</li> </ul>
VISITOR MANAGEMENT	TEMPORAL CONSIDERATIONS
<ul style="list-style-type: none"> <li>No Action</li> <li>Provide staging area/visitor info center at Parkdale, rebuild bridge or install temporary bridge</li> <li>Provide staging area/visitor info center at Parkdale, on alternative site(s)</li> <li>Provide staging area/visitor info center at Texas Creek, rebuild bridge or install temporary bridge</li> <li>Provide staging/visitor info center area east of Canon City</li> </ul>	<p><b>Construction Phase:</b></p> <ul style="list-style-type: none"> <li>No Action</li> <li>2 year construction period w/ seasonal avoidance for bighorn sheep, April 15-June 30 (Proposed)</li> <li>Compressed construction period (total duration of &lt;2 years) w/ seasonal avoidance for bighorn sheep, April 15-June 30</li> </ul> <p><b>Exhibition Phase:</b></p> <ul style="list-style-type: none"> <li>No Action</li> </ul> <p><b>Duration</b></p> <ul style="list-style-type: none"> <li>Compressed</li> <li>2-week</li> <li>Extended, 3-4 weeks</li> </ul> <p><b>Season</b></p> <ul style="list-style-type: none"> <li>Earlier</li> <li>Later</li> <li>August</li> </ul>

### 1.11 Post-Screening Considerations

Following the initial screening efforts, the BLM and Cooperating Agencies requested that several additional considerations be analyzed in detail in the EIS. These additions are noted below.

#### *Arkansas Headwaters Recreation Area Fees*

Consideration of the following fee scenarios:

- Park Pass fee of \$6.00 per vehicle entering the recreation area.
- A per person fee of \$1.00 in lieu of the Park Pass fee.

#### *Boat Permit Rationing*

Consideration of the following boat capacity scenarios:

- Enforce any and all existing commercial & private boat capacities for the various OTR related Arkansas River sections during the OTR viewing period through existing rationing and private boat permitting mechanisms.
- Remove any and all existing commercial & private boat capacities for the various OTR related Arkansas River sections during the OTR viewing period.
- Enforce temporary commercial & private boat capacities for the various OTR related Arkansas River sections during the OTR viewing period through newly developed rationing and private boat permitting mechanisms.

#### *Arkansas Headwaters Recreation Site Management*

Consideration of the following recreation site management:

- Keep all AHRA recreation sites in the OTR related Arkansas River sections open during the OTR viewing period and allow all existing recreational activities to take place at these sites.
- Keep all AHRA recreation sites in the OTR related Arkansas River sections open during the OTR viewing period and only allow OTR related recreational activities to take place at these sites.
- Keep all AHRA recreation sites in the OTR related Arkansas River sections closed during the OTR viewing period.

Upon further review, it was determined that the potential difference in effects between 10-day and two-week periods would likely be minimal. As such, following Screen Two, the compressed (10-day) viewing window has been eliminated from further consideration. Pending further resource impact analysis, the compressed viewing period may be revisited as a potential mitigation strategy.

### 1.12 Alternatives Packaging

Alternatives were assembled using the building blocks of the four project components. Five basic alternatives result, including No Action. The four action alternatives were built around panel placement as the key project component (Table 14). For clarity and uniformity of comparisons, each of the other component variations, e.g. transportation, temporal, etc. is shown as a variant of Alternative 1, which consists of 5.9 miles of panels. This is intended to keep the comparisons consistent and the results understandable. In other words, given the multiple potential combinations of components that are possible, it could become difficult to determine if a lower or higher impact determination is the result of the extent of the panels, integration of transit, or timing of display, etc. For this reason, the extent of panel placement was kept constant so that each of the other variables can be compared against that panel arrangement. If desired, the components can be re-assembled into different combinations at a later date.

**Table 14. EIS Alternative Recommendations**

			No Action	Alternative 1				Alt. 2	Alt. 3	Alt. 4
				1a	1b	1c	1d			
<b>Panels</b>	5.9 miles at 8 sites			X	X	X	X			
	4.6 miles at 5 sites							X		
	3.4 miles at 8 sites								X	
	1.3 miles at 4 sites									X
<b>Trans</b>	No Transit			X		X	X	X	X	X
	With Transit				X					
<b>Visitor Management</b>	Rationing	Existing boat rations		X	X			X	X	X
		Remove all boat rations				X				
		New, temporary rations*					X			
	AHRA Sites	AHRA sites open, existing uses permitted; standard SP entrance fees apply		X	X			X	X	X
		AHRA sites open, OTR-related rec. uses only; event-only fees applied				X				
		Close AHRA Rec Sites; lump sum payment to offset revenue loss					X			
	Staging/Info	Parkdale A/Texas Crk**		X		X	X	X	X	X
		Parkdale B/Texas Crk***			X					
		East of Canon City			X					
<b>Temporal</b>	Constrct. Duration	Two years		X		X	X	X	X	
		One year			X					X
	Viewing Window	Two weeks		X	X		X	X	X	X
		Three weeks+ (21-28 days)				X				
	Viewing Season	June/July			X					
		August		X		X		X	X	X
		September					X			

\*New rations would apply during exhibition period only

\*\*Parkdale A/Texas Creek - Parkdale site with bridge modification; Texas Creek site with bridge modification

\*\*\*Parkdale B/ Texas Creek - Parkdale at alternative site; Texas Creek with Bridge Modification



## **2.0 ATTACHMENT**

ATTACHMENT 1 – Biological Considerations in development of Alternative 3.

**Over The River™ EIS  
Draft Wildlife Alternatives**

Prepared for BLM by EDAW

The draft alternatives for panel locations was developed by analyzing the bighorn sheep data locations, interviewing bighorn sheep specialists on-site at each panel location, and creating a scenario that would work toward lowering the probability of this project violating the migratory bird treaty act (by lessening the chance of direct mortality to migratory birds or their active nests). The primary data entering into this process is the bighorn sheep observations (recorded in GIS by the CDOW and BLM) as well as the on-site interviews discussing where the sheep come down to the river and how to buffer those locations to best avoid displacement of sheep and lowering their stress levels at the river. Lessening the displacement and stress on sheep would increase their chance of survival over the winter. Sheep stressed by activities they are not adapted to and/or imposing long dispersal distances to find forage, cover, or water makes them more susceptible to disease such as pneumonia. The lack of large breaks in some sections of panels would potentially limit where the sheep can get to water without increased levels of stress.

Smaller sections of panels, such as the design in the Countyline and Tunnel areas, provides a model for reducing the distance sheep are displaced as well as reducing the entrapment and potential mortality of birds and bats. Panel break distances are based on distances sheep tend to show stress when approached by activities they are not adapted to. A quarter mile buffer on each side of bighorn sheep high use area is ideal. However, looking at particular sites allowed for some reduction of this buffer distance. Site specific observations were also used to modify panel designs to minimize the chance of avian species mortality. The following locations (also see alternative map) have been identified as locations where heavy sheep use supports definition of a buffered to lessen stress and potential mortality:

- Parkdale panel series: In total, this section is close to 4 miles long with no significant breaks. A significant break is defined as a distance of about a half mile long centered on an area of high use by sheep. This should also provide a larger area that avian insectivores would have to hunt without the potential for striking a cable or becoming entangled in fabric. Tallahassee Draw is an area of critical importance for bighorn sheep and the area between MM265.1 and MM264.7 would be a good place to begin the first half mile gap in this section. This would leave a 0.8 mile panel section between the private land at the entrance to the canyon and this gap.
- Parkdale panel series continued: High sheep use begins again at MM264.0. Removing the State Land Board (SLB) section, which starts at MM263.9, would provide a sufficient break through a high sheep use area. This would provide for a 0.8 mile section of panels between MM264.7 and MM263.9 followed by a 0.5 mile break from 263.9 to 263.4. The SLB section also has one large tree suitable for eagle roosts and this break would reduce the probability for bird and bat mortality.
- Parkdale panel series continued: Bootlegger Draw is highly utilized by sheep and the sheep that come down out of Bootlegger would benefit from a significant break in the panels. After a 0.3 mile section of panels from MM263.35 to MM 263.05 a 0.4 mile break is provided for the bend in the river between MM263.05 to MM262.8 to allow for the bootlegger sheep to have a sufficient (north side of river is longer distance than road miles) area to get to the river. This bend in the river also has 10 roost trees suitable for eagle use.



- Spike Buck panel series: The east end of the Spike Buck section gets a high amount of sheep use and a pattern similar to the Countyline section would be less invasive, would disperse the sheep less, and provide a break in panels for avian species. A 0.3 mile section of panels from MM262.8 to MM262.5 followed by a 0.25 mile break for wildlife at MM 262.5 to MM262.25 is provided in this alternative design. The MM262.8 to MM262.5 panel section has one suitable roost tree. The break area MM 262.5 to MM262.25 also has one suitable roost tree.
- Spike Buck panel series (west): No proposed changes. Wildlife specialists agreed that the shorter nature of this panel set is less invasive and despite high sheep use they should be able to disperse a short distance without too much stress. This area does have 4 trees suitable for eagle roosting.
- Three Rocks panel series: The river at this series is another high use area for sheep and a shorter panel section here would lessen the disturbance. The area directly across the river at MM259.2 is a place where sheep come down to drink. This bend in the river on the east extent of the Three Rocks Panel also has 2 suitable roost trees for eagle use. Removing about 350 feet (0.07 miles) of panel off the east side of this section would provide the opportunity for the sheep to move toward the east for resources. The 0.2 miles from MM 259.8 to MM 259.6 on the west end of this section are also an important area for sheep to get to the river. Requiring the sheep to travel back uphill to get up and over ridge tops to reach another river segment for water would create long distance dispersal for sheep. The area between MM259.05 and MM258.8 has steeper walls on the north side of the river and would be less disruptive. Sheep are not as likely to utilize the river here because of the steep banks and the proposed 0.25 mile section of panels would have less impact. This panel section between MM259.05 and MM258.8 has one suitable roost tree on the river bank and a Golden eagle nest 0.7 miles north of these panels. Following the CDOW raptor nest guidelines, this panel would completely fall within the area where surface disturbance is not recommended. However, the current and historical disturbance has been high in this area. This is an area that will certainly need construction mitigation techniques applied during construction and if the wildlife monitor notices behavior changes the project at this location may need to be modified.
- Maytag panel series: No proposed changes. High sheep use but the small extent of the panels here and the buffer provided by the ponds on the north side of the tracks should lessen the impacts.
- Texas Creek panel series: This is a long (0.8 mile) section of panel without a reasonable sized break for sheep or avian species to use. A break between MM253.9 and MM253.7 would allow for the sheep in this area to come down to the river. It would provide for a 0.3 mile section of panels followed by a 0.2 mile break, and then another 0.2 mile section of panels.
- Vallie Bridge panel series: No proposed changes. This area has a Golden eagle nest just across the highway from the panels. Following the CDOW raptor nest guidelines this panel would completely fall within the area where surface disturbance is not recommended. However, the current and historical disturbance has been high in this area. This is an area that may not need to be removed in the wildlife alternative but certainly will need close attention during construction and if the wildlife monitor notices behavior changes the project may need to be modified.
- Tunnel panel series: No proposed changes.
- County line panel series: The area across from MM225.7 is the most critical sheep utilization area along the river between Texas Creek and Salida. During the May site visit, 5 bighorn with 1 new lamb from this year were spotted across the river. This panel location has very high bighorn use. Panels were removed from this location in order to reduce stress/mortality to bighorn sheep. This section is about 0.25 miles long and has one large tree suitable for eagle roosts.

- A total of 2.5 miles of potential panel removal is included in this alternative (see alternative map).